

Standards of Public Land Health

Evaluation of 63081 RIM ROCK CANYON Allotment

[12/16/2009]

The Roswell Field Office conducted rangeland health assessments at 4 study sites within 63081 RIM ROCK CANYON. The assessments looked at the Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within the vicinity of each study site. Existing monitoring data was incorporated into and in support of the field assessment. The summary of each assessment is attached and shown in the following table.

Study Area or Assessment Area	UPLAND			BIOTIC			RIPARIAN		
	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet
63081-#1-F264	X			X			N/A		
63081-#3-F265	X			X			N/A		
63081-NORTH-F037 (*)	X			X	*		N/A		
63081-SOUTH-F038	X			X			N/A		

The (*) indicates that the assessment had one or more indicator(s) rated moderate/extreme or extreme. These indicators are:

- Invasive Plants

These indicators by themselves are not enough to rate the site as not meeting a standard but may warrant future monitoring.

Twenty-two (22) indicators for Rangeland Health were evaluated for public land on the Rim rock Canyon allotment, 63081. Ten of these assessed soil site stability, 11 hydrologic functions and 13 assessed biotic integrity. These qualitative assessments in conjunction with quantitative information gathered from previous data collected at the trend study plot locations within the allotment were utilized to make rangeland health determinations. Quantitative evaluations are performed by the Roswell Field Office interdisciplinary teams, which include some or all of the following: ground and vegetative cover and composition, production, frequency and ecological condition. The collections which were initiated in the late 1970's/early 1980's, are scheduled and conducted approximately every 5 years. This allotment is in the "I" (Improve) category.

This allotment contains 6,495 acres of public land. The studies are located on four ecological sites; Bottomland CP-3, Sandy SD-2, Swale CP-2 and Loamy SD-2.

The first study (No. 1) location is in a Loamy SD-2 ecological site. All but three of the indicators for this location fell into either the None to Slight or Slight to Moderate category; Plant Community Composition and Distribution Relative to Infiltration and Runoff, Functional/Structural Groups and Invasive Plants all were rated as a Moderate degree of departure due to the presence or encroachment of mesquite and creosote.

The study (No. 3) located in a Bottomland CP-3 had two indicators rated as Moderate: soil Surface Resistance to Erosion and Soil Surface Loss or Degradation. The remaining indicators were rated as None to Slight or Slight to Moderate. The Invasive Plants indicator was rated as Slight to Moderate, but scattered mesquite was noted here.

The Sandy SD-2 (North) study location had one indicator (Invasive Plants) rated as a Moderate to Extreme degree of departure from the ecological site description, due to the presence and encroachment of creosote. The interdisciplinary team recommended that this area be considered for a land treatment, to maintain the diversity of the area and to prevent the establishment of a monoculture with little or no understory. Several of the other indicators were rated as Moderate; Water Flow Patterns, Bare Ground, Wind-scouring, blowouts, and/or Deposition Areas, Litter Movement, soil Surface Resistance to Erosion, soil Surface Loss or Degradation, Plant Community composition and Distribution Relative to Infiltration and Runoff, Functional/Structural Groups and Annual Production- all being heavily influenced by the amount of creosote. The remaining indicators were rated as None to Slight or Slight to Moderate.

The South study is located in a Swale CP-2 ecological site. Six of the indicators were rated as “Moderate”: Water Flow Patterns, Pedestals and/or Terracettes, Soil Surface Resistance to Erosion, Functional/Structural Groups, Plant Mortality and Invasive Plants- undesirable shrubs were noted at this site and are influencing these indicators. The team did recommend that this area be mapped for brush, and if feasible a land treatment be implemented.

There are no riparian areas on the public land within this allotment.

Recommendations: With a majority of the indicators falling in the None to Slight or Slight to Moderate category, this allotment is rated as “Meeting” the standards for Rangeland Health. Continue the rangeland monitoring studies to insure proper stocking rates are maintained and that the perennial grass cover and good plant composition remains. Continue to monitor and evaluate the potential for brush control and complete a land treatment for creosote or mesquite if warranted.

RFOs Upland and Biotic Standard Assessment Summary Worksheet						
SITE 63081-#1-F264						
Legal Land Desc	SENE 8 0090S 0090E Meridian 23		Acreage		1697	
Ecosite	042BY014NM LOAMY SD-2		Photo Taken		Y	
Watershed	13050003060 COTTONWOOD					
Observers	ARNOLD, TRAUTNER, VINSON, ORTEGA		Observation Date		12/16/2009	
County Soil Survey	NM632 LINCOLN		Soil Var/Taxad			
Soil Map Unit	034		Soil Taxon Name		MALARGO	
Texture Class	NM632 L		Soil Phase		MALARGO- BLUEPOINT	
Texture Modifier	NM632 LOAM,LOAMY FINE SA					
Observed Avg Annual Precipitation			Observed Avg Growing Season Precipitation			
NOAA Annual Precipitation			NOAA Growing Season Precipitation			
NOAA Avg Annual Precipitation			NOAA Avg Growing Season Precipitation			
Disturbances and Animal Use:						
Part 2. Attributes and Indicators						
		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns				X	
Comments:	Short and stable					
S H	Pedestals and/or Terracettes				X	
Comments:	low areas only					
S H	Bare Ground					X
Comments:	8% mostly rock in interspaces					

S H	Gullies					X
Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments:						
H	Litter Movement				X	
Comments:						
S H B	Soil Surface Resistance to Erosion				X	
Comments:						
S H B	Soil Surface Loss or Degradation				X	
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff			X		
Comments:	mesquite & creosote encroachment					
S H B	Compaction Layer				X	
Comments:						
B	Functional/Structural Groups			X		
Comments:						
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount				X	
Comments:	estimated at 30%					
B	Annual Production				X	
Comments:						
B	Invasive Plants			X		
Comments:	Mesquite, creosote - needs to be mapped to verify if treatment is needed.					
B	Reproductive Capability of Perennial Plants				X	
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:						
B	Wildlife Habitat				X	
Comments:						
B	Wildlife Populations				X	

Comments:						
B	Special Status Species Habitat					
Comments:	Not applicable					
B	Special Status Species Populations					
Comments:	Not applicable					
Part 3. Summary						
A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.						
Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	0	6	4
H	Hydrologic	0	0	1	7	3
B	Biotic	0	0	2	8	1
B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the <i>Does not Meet</i> column, Moderate becomes <i>May Need More Info</i> , and Slight to Moderate and None to Slight merge to form the <i>Meets</i> columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.						
Attribute	Rationale	Does Not Meet	May Need More Info	Meets		
Soil		0	0	10		
Hydrologic		0	1	10		
Biotic		0	2	9		
Site Notes: Species noted at this location: mesquite, creosote, 4-wing saltbush, snakeweed, burro grass, tobosa, black grama & dropseed.						
More shrubs than expected.						

RFOs Upland and Biotic Standard Assessment Summary Worksheet

SITE 63081-#3-F265

Legal Land Desc	NWSW 34 0080S 0090E Meridian 23	Acreage	1696
Ecosite	070CY103NM BOTTOMLAND CP-3	Photo Taken	N
Watershed	13050003060 COTTONWOOD		
Observers	ARNOLD, TRAUTNER	Observation Date	12/16/2009
County Soil Survey	NM632 LINCOLN	Soil Var/Taxad	
Soil Map Unit	095	Soil Taxon Name	TULARGO
Texture Class	NM632 L	Soil Phase	TULARGO- ANDERGEORGE
Texture Modifier	NM632 LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation		NOAA Growing Season Precipitation	
NOAA Avg Annual Precipitation		NOAA Avg Growing Season Precipitation	
Disturbances and Animal Use:			

Part 2. Attributes and Indicators

		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns				X	
Comments:						
S H	Pedestals and/or Terracettes				X	
Comments:						
S H	Bare Ground				X	
Comments:						
S H	Gullies					X

Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments:						
H	Litter Movement				X	
Comments:						
S H B	Soil Surface Resistance to Erosion			X		
Comments:						
S H B	Soil Surface Loss or Degradation			X		
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:						
S H B	Compaction Layer				X	
Comments:						
B	Functional/Structural Groups				X	
Comments:						
B	Plant Mortality/Decadence				X	
Comments:						
H B	Litter Amount				X	
Comments:						
B	Annual Production				X	
Comments:						
B	Invasive Plants				X	
Comments:	scattered mesquite					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:						
B	Wildlife Habitat				X	
Comments:						
B	Wildlife Populations				X	
Comments:						

B	Special Status Species Habitat					
Comments:	Not applicable					
B	Special Status Species Populations					
Comments:	Not applicable					
Part 3. Summary						
A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.						
Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	2	5	3
H	Hydrologic	0	0	2	7	2
B	Biotic	0	0	2	8	1
B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the <i>Does not Meet</i> column, Moderate becomes <i>May Need More Info</i> , and Slight to Moderate and None to Slight merge to form the <i>Meets</i> columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.						
Attribute	Rationale	Does Not Meet	May Need More Info	Meets		
Soil		0	2	8		
Hydrologic		0	2	9		
Biotic		0	2	9		
Site Notes: Species noted at this location: Mesquite, yucca, ephedra, tobosa, black grama, burro grass & dropseed.						

RFOs Upland and Biotic Standard Assessment Summary Worksheet

SITE 63081-NORTH-F037

Legal Land Desc	SENE 15 0090S 0080E Meridian 23	Acreage	1520
Ecosite	042BY012NM SANDY SD-2	Photo Taken	Y
Watershed	13050003060 COTTONWOOD		
Observers	ARNOLD, TRAUTNER	Observation Date	12/16/2010
County Soil Survey	NM632 LINCOLN	Soil Var/Taxad	
Soil Map Unit	034	Soil Taxon Name	MALARGO
Texture Class	NM632 LFS	Soil Phase	MALARGO- BLUEPOINT
Texture Modifier	NM632 LOAM,LOAMY FINE SA		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation		NOAA Growing Season Precipitation	
NOAA Avg Annual Precipitation		NOAA Avg Growing Season Precipitation	
Disturbances and Animal Use:	Cattle grazing & trails		

Part 2. Attributes and Indicators

		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns			X		
Comments:	water flow patterns beginning to form					
S H	Pedestals and/or Terracettes				X	
Comments:						
S H	Bare Ground			X		
Comments:	35% large areas					

S H	Gullies				X	
Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas			X		
Comments:	Litter and soil collecting around shrubs.					
H	Litter Movement					
Comments:						
S H B	Soil Surface Resistance to Erosion			X		
Comments:	some piling around vegetation					
S H B	Soil Surface Loss or Degradation			X		
Comments:	very little organic matter in soil					
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff			X		
Comments:	too much creosote, not enough coverage by bunch grasses.					
S H B	Compaction Layer				X	
Comments:						
B	Functional/Structural Groups			X		
Comments:	Creosote land treatment would be beneficial					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount				X	
Comments:						
B	Annual Production			X		
Comments:						
B	Invasive Plants		X			
Comments:	Creosote infestation					
B	Reproductive Capability of Perennial Plants				X	
Comments:	Cresosote may be limiting the reproductive capability of adjacent plants.					
S	Physical/Chemical/Biological Crusts				X	
Comments:						
B	Wildlife Habitat				X	
Comments:						
B	Wildlife Populations				X	

Comments:						
B	Special Status Species Habitat					
Comments:	Not applicable					
B	Special Status Species Populations					
Comments:	Not applicable					
Part 3. Summary						
A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.						
Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	5	4	1
H	Hydrologic	0	0	5	4	1
B	Biotic	0	1	4	5	1
B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the <i>Does not Meet</i> column, Moderate becomes <i>May Need More Info</i> , and Slight to Moderate and None to Slight merge to form the <i>Meets</i> columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.						
Attribute	Rationale	Does Not Meet	May Need More Info	Meets		
Soil		0	5	5		
Hydrologic		0	5	5		
Biotic	This indicator is being influenced by the level of encroachment of creosote. The creosote is influencing the Plant Community Composition, the Functional/Structural groups, the Invasive Plants and the Reproduction Capablity of the Perennial Plants. The team would strongly recommend a land treatment for creosote in this pasture.	1	4	6		
Site Notes: Species noted at this site: Creosote, mesquite, cholla, broom snakeweed, russian thistle , four wing saltbush, yucca, sacaton, burro grass, bush muhly, tobosa, perennial and annual forbs.						

RFOs Upland and Biotic Standard Assessment Summary Worksheet						
SITE 63081-SOUTH-F038						
Legal Land Desc	NWSE 22 0090S 0080E Meridian 23		Acreage		995	
Ecosite	070BY057NM SWALE CP-2		Photo Taken		Y	
Watershed	13050003060 COTTONWOOD					
Observers	ARNOLD, TRAUTNER		Observation Date		12/16/2009	
County Soil Survey	NM632 LINCOLN		Soil Var/Taxad			
Soil Map Unit	019		Soil Taxon Name		GABALDON	
Texture Class	NM632 SIL		Soil Phase		GABALDON	
Texture Modifier	NM632 SILT LOAM					
Observed Avg Annual Precipitation			Observed Avg Growing Season Precipitation			
NOAA Annual Precipitation			NOAA Growing Season Precipitation			
NOAA Avg Annual Precipitation			NOAA Avg Growing Season Precipitation			
Disturbances and Animal Use:						
Part 2. Attributes and Indicators						
		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills				X	
Comments:						
S H	Water Flow Patterns			X		
Comments:	Evident by bare ground and litter movement					
S H	Pedestals and/or Terracettes			X		
Comments:						
S H	Bare Ground				X	
Comments:	Large pockets of bare ground					
S H	Gullies				X	
Comments:						

S	Wind-scoured, Blowouts, and/or Deposition Areas				X	
Comments:						
H	Litter Movement				X	
Comments:						
S H B	Soil Surface Resistance to Erosion			X		
Comments:						
S H B	Soil Surface Loss or Degradation				X	
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:	Large areas of bare ground which increasing runoff from nearby mountains.					
S H B	Compaction Layer				X	
Comments:						
B	Functional/Structural Groups			X		
Comments:	Increase in undesirable shrubs.					
B	Plant Mortality/Decadence			X		
Comments:	Some shrubs are dying, indications of pest treatment in protion of the pasture.					
H B	Litter Amount				X	
Comments:						
B	Annual Production				X	
Comments:						
B	Invasive Plants			X		
Comments:	Creosote should be mapped to see if land treatment is feasible.					
B	Reproductive Capability of Perennial Plants				X	
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:						
B	Wildlife Habitat				X	
Comments:						
B	Wildlife Populations				X	
Comments:						
B	Special Status Species Habitat					

Comments:	Not applicable					
B	Special Status Species Populations					

Comments:	Not applicable					
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Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	3	7	0
H	Hydrologic	0	0	3	8	0
B	Biotic	0	0	4	7	0

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	3	7
Hydrologic		0	3	8
Biotic		0	4	7

Site Notes: Good grass composition in areas that are not bare, however there are large areas of bare ground.

Determination of Public Land (Rangeland) Health for 63081 RIM ROCK CANYON

The Record of Decision (ROD) for the New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management (dated January 2001) adopted three Standards for Public Land Health. These are (1) Upland Sites Standard, (2) Biotic Communities, Including Native, Threatened, Endangered, and Special Status Species Standard and (3) Riparian Sites Standard.

The ROD also established a process for the BLM Field Offices for implementation. Through a public participation process, the Roswell Field Office developed and adopted indicators to use in conjunction with existing monitoring data to assess these standards.

Field assessment worksheets and other available data that evaluate the local indicators were completed for this allotment. Based on these assessments, it is my determination that public land within Rim Rock Canyon, allotment #63081, meets the (1) Upland Sites standard and (2) Biotic Communities, including Native, Threatened, Endangered, and Special Status Species standard. There are no public land Riparian areas on this allotment, therefore this standard was not addressed.

/s/ J. Howard Parman

Acting Assistant Field Manager

04/05/2010

Date